Epiwafer ramp-up

Sumika Electronic Materials, a subsidiary of Sumitomo Chemical Company Limited, has purchased epiwafer manufacturing equipment from an undisclosed semiconductor manufacturer. Sumika's epiwafer facility in Phoenix, Arizona will use the equipment to increase current HBT and diode product lines. The facility will also provide a second site to produce pHEMTs to complement Sumitomo Chemical's facility in Japan (Sumika Epi-Solution Co Ltd).

Two MOCVD systems, used to grow GaAs-based epiwafers, will be transferred to the facility, and will be in full production in Q1, 2005. The purchase of these assets will allow Sumika to commercialise new pHEMT technologies.

Sumika's facility in Phoenix was formerly owned by ATMI. In April 2003, Sumitomo Chemical Co Ltd purchased the assets of ATMI's GaAs epiwafer business and formed two companies. In Japan, Sumika Epi-Solution Co Ltd manufactures epiwafers at Sumitomo Chemical's Chiba facility, and in the USA Sumika Electronic Materials Inc produces epiwafers and markets Sumitomo Chemical's photoresists, wet chemicals, cleaners, sputtering targets, and super engineering polymers.

ORS moves

ORS Ltd has relocated to the new OpTIC Technium, based in St Asaph, North Wales. The purpose built centre for companies working in the opto-electronics sector includes clean-rooms and MOCVD growth facilities.

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II-VI adds to compound semiconductor division

II-VI Incorporated has acquired all the equity interests of Marlow Industries Inc in a transaction valued at approximately $31m, subject to post-closing adjustments. Marlow's revenues for the last twelve months were approximately $26m.

Marlow, based in Texas, designs and manufactures thermoelectric equipment for cooling and power generation, with a focus on compound semiconductor materials. With this acquisition, Marlow becomes an operating unit within II-VI's Compound Semiconductor Group (CSG) segment, reporting to Vincent D. (Chuck) Mattera Jr, vice president and general manager of CSG.

"Marlow's leading portfolio of thermoelectric cooling solutions complements our strong position in optical and opto-electronic components, devices and materials for infrared, near-infrared, visible light, x-ray and gamma ray instrumentation. Our combined company will offer one of the broadest product arrays to space, defense, medical, industrial and telecommunication markets," said Francis J Kramer, II-VI Incorporated's president and chief operating officer.

As a result of the above acquisition, for the second fiscal quarter ending December 31, 2004, the company currently forecasts revenues to range from $43 million to $45 million and earnings per share to range from $0.38 to $0.42. For the fiscal year ending June 30, 2005, the company expects revenues to range from $185 million to $190 million and earnings per share to range from $1.52 to $1.59.

UV laser micro hole drilling for III/V materials

J P Sercel Associates (JPSA) now offers contract hole drilling services for a range of materials, including: III/V compounds, silicon nitride, quartz and sapphire. JPSA's UV excimer and DPSS lasers utilise a range of UV wavelengths from 157nm to 355nm, and can drill smooth, straight or tapered holes depending on the application required. Holes can be drilled in most materials up to 2mm thick. Hole sizes range from 1 micron in diameter up to 2 mm diameter (in thin materials). JPSA can align holes to pre-existing features, can create shaped (e.g. square, diamond, etc.), blind, through, tapered holes, slots, vias, and other features.

Material removal is controlled through photo-ablation, whereby material is removed with successive laser pulses at a very high repetition rate. The process does not cause the product to heat, and the ablated material evaporates as a plasma plume, with virtually no waste products to contaminate surrounding materials. Photo-ablation enables complex shapes and features to be created. JPSA's Applications Development Lab will evaluate the feasibility and manufacturability, as well as develop the process, for any application.

New version software for spectrometers

Panalytical has released version 3.0 software for their range of MiniPal and MiniMate EDXRF benchtop spectrometers. New features make it easier to use, enable versatile analysis, and include recalibration, spectra comparison, extended database formatting possibilities and other enhancements. Additionally, a Quick Start Guide for the MiniPal, simplifying installation and application set-up, is now supplied as part of the package.

Version 3.0 allows the user to compare spectra of samples from the same application or from different applications. Up to 64 spectra can be displayed at the same time. Spectra can also be scaled and shown in 3D.

AXT's Q4 results lower than expected

Compound semiconductor substrates manufacturer AXT Inc expects to report total revenue of approximately $7.5m in the fourth quarter ended December 31, 2004, with gross margins between 3% and 4%, and losses per share between $0.13 and $0.15, subject to the auditors' year-end results. The lower than expected gross margin was primarily due to a high percentage of raw material sales in the company's fourth quarter revenues.